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Quality Control

120 QC8- Inspect parts - second check 0.00

OC

Memo

Quality Control

Dart Aerospace Ltd	D	art	<b>Aeros</b>	pace	Ltd
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W/O:			W	ORK ORDER CHANG	ES		• • •		
DATE	STEP	PR	OCEDURE CHA	ANGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
Part No	•	PAR #:	Fault Cate	egory:	_ NCR: Yes	No <b>DQ</b>	A:	_ Date: _	
	Res	solution:	Dispositio	on:	_ QA: N/C CI	osed:		Date: _	
NCR:			WORK ORD	ER NON-CONFORM	ANCE (NCF	R)			
DATE	STEP	Description of NC Section A	Initial	Corrective Action Section Description	ion B Sign 8	Verification Section C		Approval Chief Eng	Approval QC Inspector
			Chief Eng	Chief Eng	Date	0001		Office Eng	GO Mapeciol
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Picklist P	rint
July 08, 2009	11:11:27 AM

Page 1

Work Order ID: 50096

Parent Item:

D3121-21RevE

Parant Itam Nama Rolt

Work Ore July 08, 2009	der ID 50	0096									Page 2
Item ID: Revision ID: Item Name:	D3121-21 E Bolt			Accept				Setu	p Star Stoj		
Start Date: Required Dat Reference:	7/10/2009 re: 7/31/2009	<b>Start Qty:</b> 40.00 <b>Req'd Qty:</b> 40.00			Cust Item II Customer:	D:					
Approvals:	Process Pl	an:	Date:	Tooling: SPC (Y/N):		te:		Run	Star Sto <sub>j</sub>		
Sequence ID/ Work Center 130 Packaging		Operation Description Identify as per dwg & Sto	ck Location: <u>23</u> 5	Set Up/ Run Hours 0.00	Draw Number	Draw Rev.	Plan Code		Reject Qty	Reject Number	Insp. Stamp
Packaging		QC21- Final Inspection -	Work Order Release	0.00	•			091071	39	<u>}</u>	
QC Quality Control		Memo		0.00				11 0	GeO	7.13	,

W/O:			WO	RK ORDER CHANG	GES					
DATE	STEP	PRO	PROCEDURE CHANGE			,	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
Part No		PAR #:								
	Reso			Disposition: QA: N/C Closed: Date						
NCR:		,	WORK ORDE	ER NON-CONFORM	ANCE (N	CR)				
DATE	STEP	Description of NC			ction B		Verific	ation	Approval	Approval
DAIL	SILP	Section A	Initial Chief Eng	Action Description Chief Eng		gn & ate	Section	on C	Chief Eng	QC Inspecto
NOTE	ate & initial al	l entries							•	

DART AEROS	PACE LTD				Work Order:	50096
Description:	BALT	•			Part Number:	03121-2
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Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
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Measured by:		, , , , , , , , , , , , , , , , , , , ,	Audited by:		Promis	pe Approvai:	N/A
D	ate:	09/07/10	Date:	63/07/10		Date:	N/A
Rev D	ate	Change				Revised by	Approved
A	******	New Issue			/	KJ/JLM	



DESIG	4	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHEC	KED	APPROVED	DRAWING NO. REV. E
	91		D3121 SHEET 1 OF 10
DATE			TITLE SCALE
07.1	1.07		BRACKET ASSEMBLY 1:2
Α		02.04.15	NEW ISSUE
В		03.01.16	ADD RIDGES; ADD MAT'L PROP; FIX P/N ADD -141/-143/-144/-145/-146
С		04.02.17	ADD CLEARANCE; USE -241 BEARING
D		06.05.17	D3121-25 CAP WAS 1.024, NOW 1.000

# RELEASED

D3121-21 BOLT (1)
D3121-241
BEARING ASSEMBLY (1)

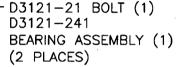
#### D3121-041 BRACKET ASSEMBLY

07.11.07

(REPLACES PREMIER P/N B30-23000-33)

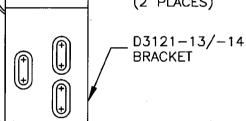
ADD TOLERANCE TO 0.032 (DETAIL B)

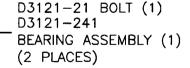




# D3121-043 (SHOWN) / D3121-044 (OPPOSITE) BRACKET ASSEMBLY

(REPLACES PREMIER P/N B30-23000-37/-38)





#### D3121-045 (SHOWN) / D3121-046 (OPPOSITE) BRACKET ASSEMBLY

(REPLACES PREMIER P/N B30-23000-35/-36)



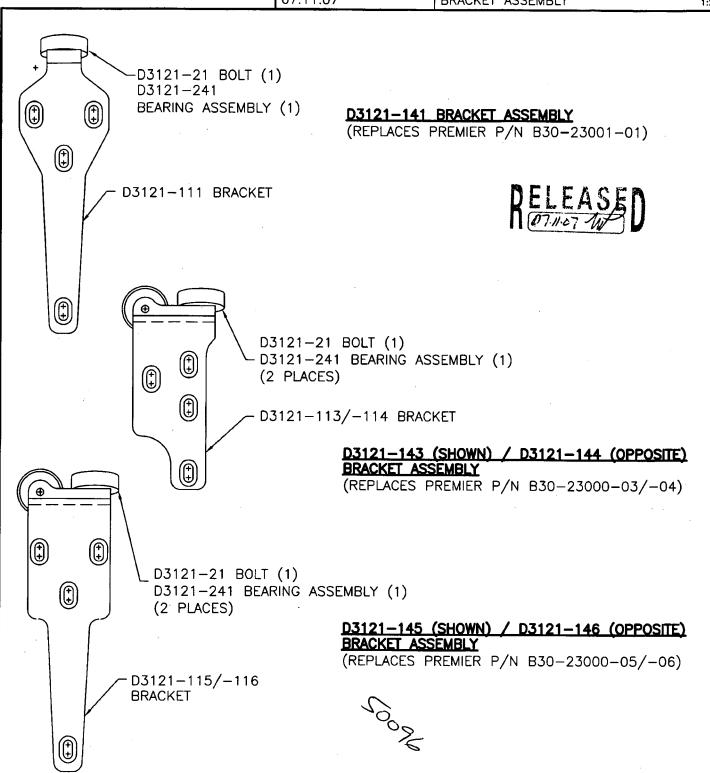
D3121-15/-16 BRACKET

Copyright @ 2002 by DART AEROSPACE LTD

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		WO	RK ORDER CHANG	ES				
STEP	PRO	OCEDURE CHAN	IGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
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:	PAR #:	Fault Categ	jory:	_ NCR: Yes	No <b>DQ</b>	A:	Date:	
		WORK ORDE	R NON-CONFORMA	NCE (NCI	7)			
STEP Description of NC Section A	Description of NC			Verifi	cation	Approval	Approval	
	Initial Chief Eng	Action Description Chief Eng		&   Sect		Chief Eng	QC Inspector	
				:				
	STEP	STEP PRO  PRO  PAR #:  Resolution:	STEP PROCEDURE CHAN  PAR #: Fault Category  Resolution: Disposition  WORK ORDE  STEP Description of NC Section A Initial	WORK ORDER CHANGE  PROCEDURE CHANGE  PROCEDURE CHANGE  Fault Category:  Disposition:  WORK ORDER NON-CONFORMA  STEP  Description of NC Section A  Initial Action Description	WORK ORDER CHANGES  STEP PROCEDURE CHANGE By  :PAR #:Fault Category:NCR: Yes  Resolution:Disposition:QA: N/C C  WORK ORDER NON-CONFORMANCE (NCI  STEP Description of NC	WORK ORDER CHANGES  STEP PROCEDURE CHANGE By Date	WORK ORDER CHANGES  STEP PROCEDURE CHANGE By Date Qty  :PAR #:Fault Category:NCR: Yes No DQA: Resolution:Disposition:QA: N/C Closed:  WORK ORDER NON-CONFORMANCE (NCR)  STEP Description of NC	WORK ORDER CHANGES  STEP PROCEDURE CHANGE By Date Qty Chief Eng / Prod Mgr  :PAR #:Fault Category:NCR: Yes No DQA:Date:



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DATE		TITLE	SCALE
07.11.07		BRACKET ASSEMBLY	1:2

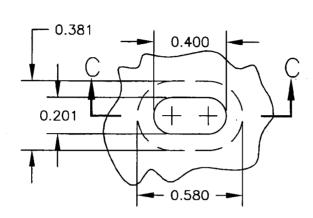


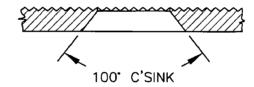
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Part No	•	PAR #:	Fault Cate	gory:	_ NCR: Yes	No <b>DQ</b>	A:	Date: _	
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DATE		TITLE	SCALE
07.11.07		BRACKET ASSEMBLY	1:1

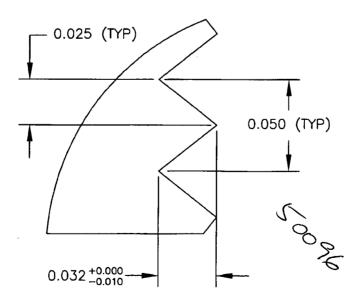
**DETAIL A:** SCALE 2:1 VIEW ROTATED





SECTION C-C

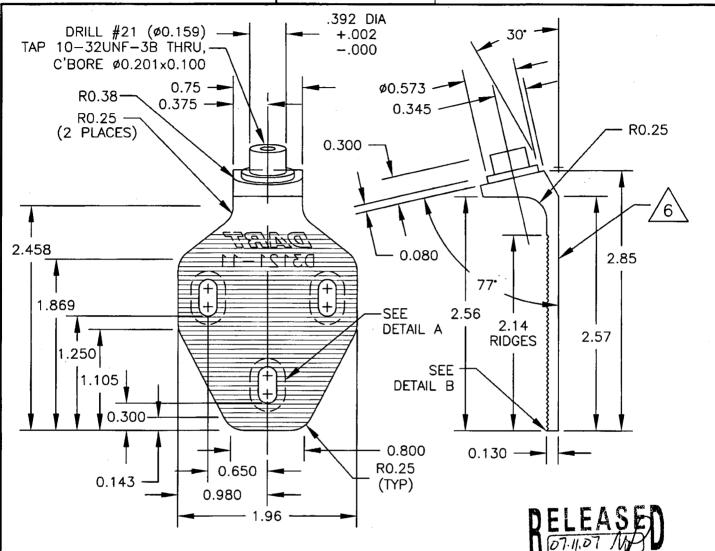
**DETAIL B:** RIDGE DETAIL PARTIAL SECTION **SCALE 1:20** 



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		WC	RK ORDER CHANG	ES						
STEP	PRO	OCEDURE CHA	NGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector		
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DATE		TITLE	SCALE
07.11.07		BRACKET ASSEMBLY	1:1



#### **D3121-11 BRACKET**

1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B) MIN ULTIMATE TENSILE = 150 ksi

MIN YIELD TENSILE = 100 ksi

- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) ENGRAVE DART P/N & LOGO AS SHOWN
- 6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005



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W/O:		WORK ORDER CHANGES										
DATE	STEP	PR	OCEDURE CHA	NGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector			
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Part No	•	PAR #:	Fault Category: NCR:			NCR: Yes No DQA: Date:						
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NCR:		,	WORK ORD	ER NON-CONFORMA	NCE (NC	₹)						
DATE	STEP	Description of NC	Corrective Action Section B Initial Action Description			Sign & Verificat			Approval			
		Section A	Chief Eng	Action Description Chief Eng	Date		ion C	Chief Eng	QC Inspector			
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D3121-13

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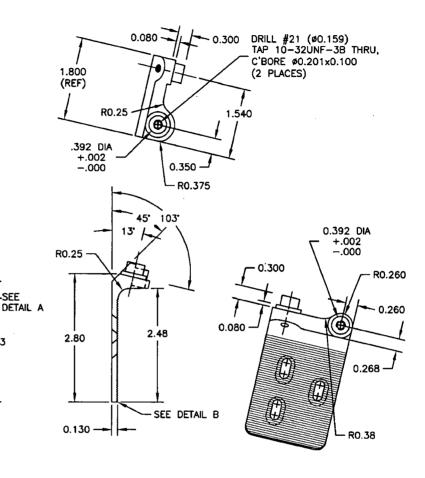
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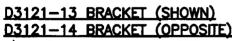
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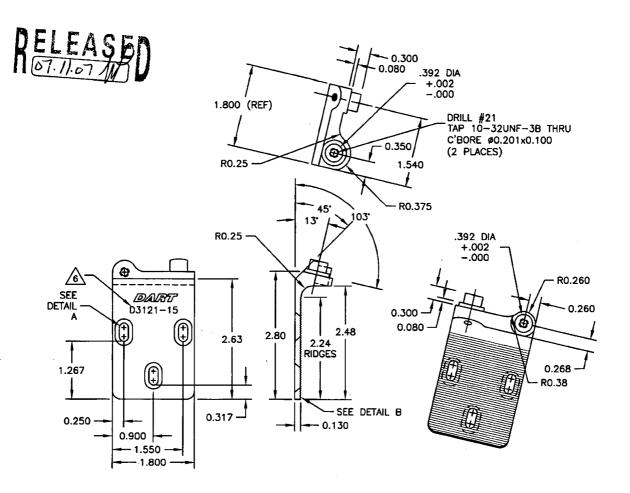
- 1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B) MIN ULTIMATE TENSILE STRENGTH = 150 ksi MIN YIELD TENSILE STRENGTH = 100 ksi
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) ENGRAVE DART P/N & LOGO AS SHOWN
- 6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005



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W/O:			WC	RK ORDER CHANG	ES							
DATE	STEP	PRO	OCEDURE CHA	NGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector			
			W-4	***								
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Part No:		PAR #:	Fault Cate	_ Fault Category: N			NCR: Yes No DQA: Date:					
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NCR:		•	WORK ORD	ER NON-CONFORM	ANCE (NC	R)						
DATE	STEP	Description of NC		Corrective Action Section B			cation	Approval	Approval			
DAIL	Section A		Initial Chief Eng	Action Description Chief Eng	Sign Date		ion C	Chief Eng	QC Inspector			



DESIGN #	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA					
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9#	9	D3121	SHEET 6 OF 10				
DATE .		TITLE	SCALE				
07.11.07		BRACKET ASSEMBLY	1:2				



# D3121-15 BRACKET (SHOWN) D3121-16 BRACKET (OPPOSITE)

1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)

MIN ULTIMATE TENSILE = 150 ksi MIN YIELD TENSILE = 100 ksi

- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) ENGRAVE DART P/N AND LOGO AS SHOWN
- 6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

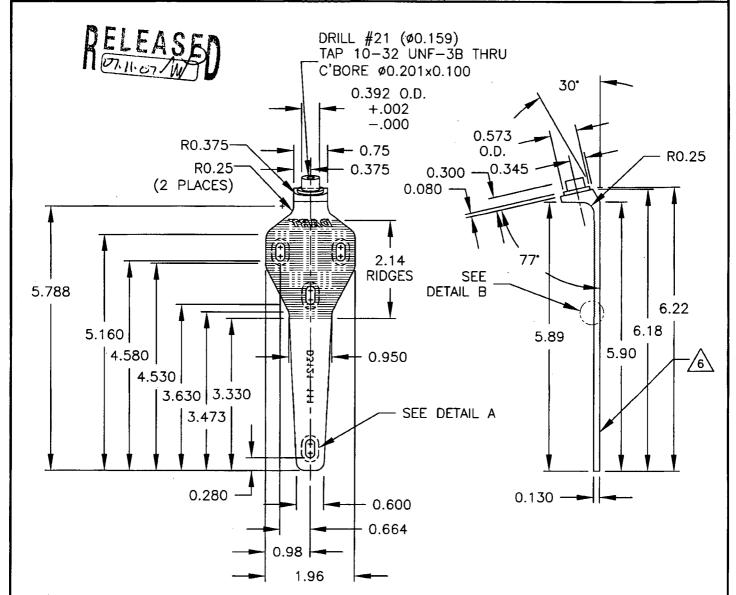


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W/O:		WORK ORDER CHANGES										
DATE	STEP	PROCEDURE CHANGE			Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector			
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DATE	STEP	Description of NC		Corrective Action Section B		Verific	cation Approval	Approval				
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#		D3121	SHEET 7 OF 10		
DATE		TITLE	SCALE		
07.11.07		BRACKET ASSEMBLY	1:2		



#### **D3121-111 BRACKET**

- 1) REPLACES PREMIER P/N B32-23001-11
- 2) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)

MIN ULTIMATE TENSILE = 150 ksi

MIN YIELD TENSILE = 100 ksi

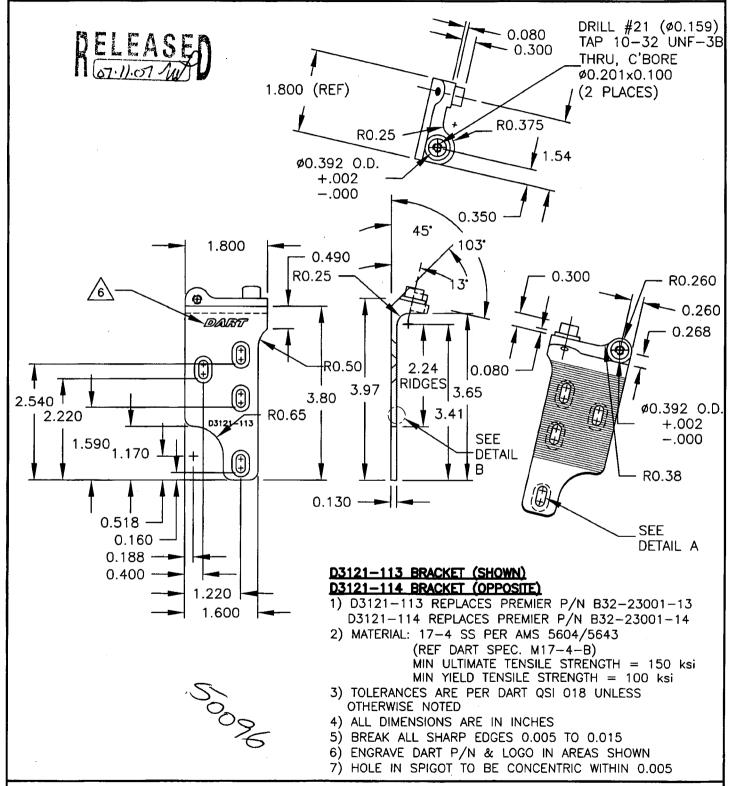
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHEWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 6) ENGRAVE DART P/N & LOGO IN AREAS SHOWN
- 7) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005



W/O:		WORK ORDER CHANGES											
DATE	STEP	PR	OCEDURE CHAI	NGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector				
		PAR #:	Fault Cate	gory:	NCR: Yes No DQA: Date:								
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DATE	SIEP		Initial Chief Eng	Action Description Chief Eng	Sign Date	& Section		Chief Eng	QC Inspector				
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DATE		TITLE	SCALE			
07.11.07		BRACKET ASSEMBLY	1:2			

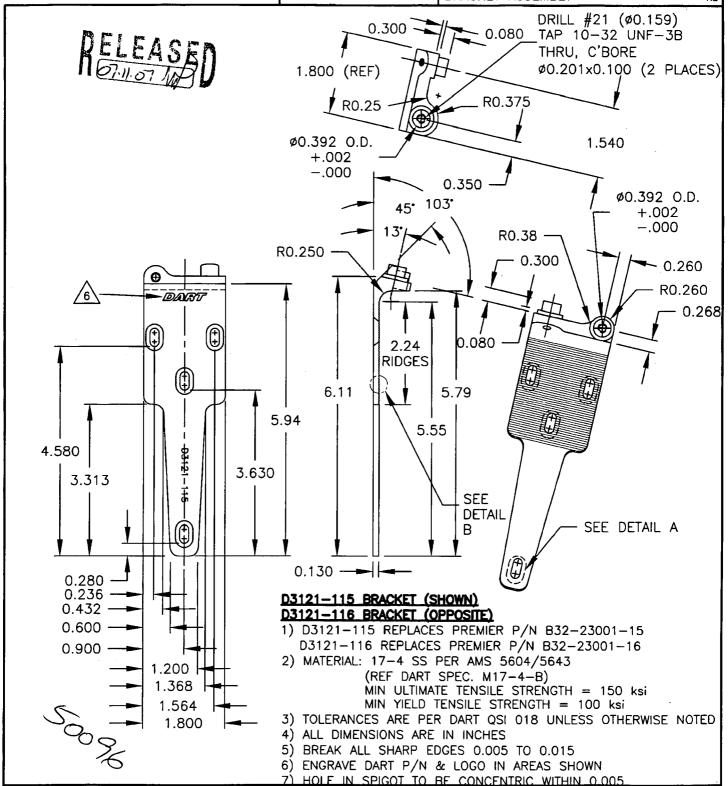


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W/O:			WC	ORK ORDER CHANG	GES					
DATE	STEP	PRO	OCEDURE CHA	NGE		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
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				Disposition: QA						
NCR:			WORK ORD	ER NON-CONFORM	IANCE	(NCR)				
DATE	STEP	Description of NC	Corrective Action Section B			Verificat			Approval	Approval
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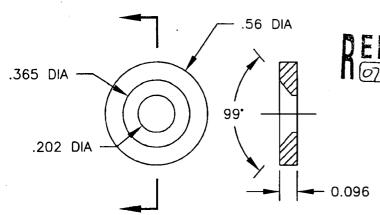


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DATE	STEP	PROCEDURE CHANGE				у	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
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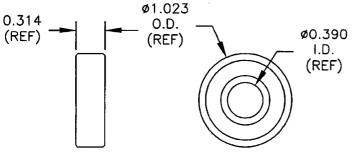


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	DATE		TITLE	SCALE		
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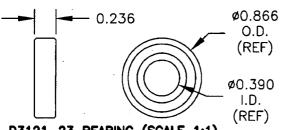
#### D3121-17 WASHER (SCALE 2:1)

- 1) REPLACES PREMIER P/N B32-23001-17
- 2) MATERIAL: AISI 303 SS ROUND BAR, ANNEALED (REF DART SPEC. M303R)
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015



#### D3121-19 BEARING (SCALE 1:1)

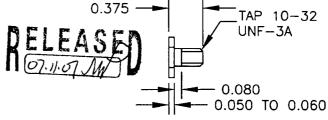
- 1) POSSIBLE SUPPLIER: KING BEARING P/N 6000-2ZJ/EM FAFNIR P/N 9100KDD
- 2) ALL DIMENSIONS ARE IN INCHES



D3121-23 BEARING (SCALE 1:1)

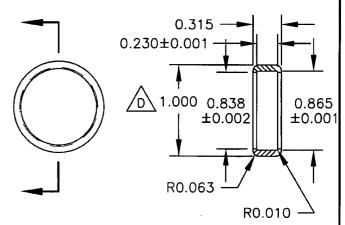
1) POSSIBLE SUPPLIER: SKF P/N 61900-2Z OR KML P/N 6900-ZZ

2) ALL DIMENSIONS ARE IN INCHES



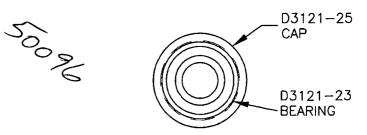
#### D3121-21 BOLT (SCALE 1:1)

- 1) MATERIAL: AISI 303 SS HEX, ANNEALED (REF DART SPEC. M303H0.500)
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015



#### D3121-25 CAP (SCALE 1:1)

- 1) MATERIAL: DELRIN ROD, Ø1.25
  (REF DART SPEC. M-DELRIN-R1.250)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES



D3121-241 BEARING ASSEBLY (SCALE 1:1)

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W/O:			W	ORK ORDER CHANGE	S				
DATE	STEP	PROCEDURE CHANGE			Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
					!				:
Part No:		PAR #:	Fault Cate	NCR: Yes	No DQ	A:	Date:		
Resolution:									
NCR:		,	WORK ORD	ER NON-CONFORMA	NCE (NC	R)			
DATE	STEP Description of NC Section A	Description of NC		n B	Verifi	cation	Approval Chief Eng	Approval QC Inspector	
DATE		Initial Chief Eng	Action Description Chief Eng	Sign Date	&   Sect	ion C			
									1
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